

IN THE CLAIMS:

Amendments to the Claims

Please amend claims 1-14 and add the following new claims as shown below:

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A ~~liquid crystal~~ display device comprising:
a ~~liquid crystal~~ display panel;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a semiconductor device of a film carrier type which is disposed to lie between the ~~liquid crystal~~ display panel and the printed circuit board and is mounted on a film carrier,

terminals of the semiconductor device being respectively connected by an anisotropic conductive film to terminals of the printed circuit board that are disposed in opposition to ~~the~~ respective terminals of the semiconductor device,

each of the terminals of at least one of the film carrier and the printed circuit board connected by the anisotropic conductive film being spaced apart from an adjacently disposed terminal by a distance of no greater than 0.40 mm ~~or less~~.

2. (currently amended) A ~~liquid crystal~~ display device according to claim 1, wherein each of the terminals of at least one of the film carrier and the printed circuit board connected by the anisotropic conductive film is spaced apart from an adjacently disposed terminal by a distance of no greater than 0.32 mm ~~or less~~.

3. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a semiconductor device of a tape carrier type which is disposed to lie between
the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film
carrier,

terminals of the ~~semiconductor device~~ film carrier being respectively
connected to terminals of the printed circuit board by an anisotropic conductive film,
each of the terminals of at least one of the film carrier and the printed circuit
board connected by the anisotropic conductive film being spaced apart from an
adjacently disposed terminal by a distance of no greater than 0.02 mm or less.

4. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a plurality of semiconductor devices of a film carrier type which are disposed
to lie between the ~~liquid crystal display panel~~ and the printed circuit board and are
respectively mounted on a film carrier,

terminals of each of the ~~plurality of semiconductor devices~~ film carrier being
respectively connected to terminals of the printed circuit board by an anisotropic
conductive film,

the anisotropic conductive film being formed separately for at least each one
of the ~~semiconductor devices~~ film carrier.

5. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and

a plurality of semiconductor devices of a film carrier type which are disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and are respectively mounted on a film carrier,

first terminals of each of the ~~plurality of semiconductor devices film carrier~~ being respectively connected to terminals of the printed circuit board by ~~an~~ a first anisotropic conductive film, while second terminals of each of the ~~plurality of semiconductor devices film carrier~~ are respectively connected to terminals of the ~~liquid crystal display panel~~ by an anisotropic conductive film,

the first anisotropic conductive film for connecting the first terminals of each of the ~~plurality of semiconductor devices film carrier~~ to the terminals of the printed circuit board being formed separately for at least each one of the semiconductor devices,

the second anisotropic conductive film for connecting the second terminals of each of the ~~plurality of semiconductor devices film carrier~~ to the terminals of the ~~liquid crystal display panel~~ being formed in common with the a plurality of semiconductor devices the film carrier.

6. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a plurality of semiconductor devices of a film carrier type which are disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and are respectively mounted on a film carrier,

first terminals of each of the ~~plurality of semiconductor devices film carrier~~ being respectively connected to terminals of the printed circuit board by ~~an~~ a first anisotropic conductive film, while second terminals of each of the ~~plurality of~~

~~semiconductor devices~~ film carrier are respectively connected to terminals of the ~~liquid crystal display panel~~ by ~~an~~ a second anisotropic conductive film,

the first anisotropic conductive film for connecting the first terminals of each of the ~~plurality of semiconductor devices~~ film carrier to the terminals of the printed circuit board being formed separately for at least each one of the ~~semiconductor devices~~ film carrier,

the second anisotropic conductive film for connecting the second terminals of each of the ~~plurality of semiconductor devices~~ film carrier to the terminals of the ~~liquid crystal display panel~~ being formed separately for at least each one of the ~~semiconductor devices~~ film carrier.

7. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a ~~plurality of semiconductor devices~~ device of a film carrier type which ~~are~~ is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier,

first terminals of each of the ~~plurality of semiconductor devices~~ the film carrier being ~~respectively~~ connected to terminals of the printed circuit board by ~~an~~ a first anisotropic conductive film, while second terminals of each of the ~~plurality of semiconductor devices~~ the film carrier are ~~respectively~~ connected to terminals of the ~~liquid crystal display panel~~ by ~~an~~ a second anisotropic conductive film,

the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of each of the ~~plurality of semiconductor devices~~ the film carrier being formed to have a lower melting point than the second anisotropic conductive film for connecting the terminals of the ~~liquid crystal display~~

panel to the second terminals of ~~each of the plurality of semiconductor devices~~ the film carrier.

8. (currently amended) A ~~liquid crystal~~ display device comprising:
a ~~liquid crystal~~ display panel;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a ~~plurality of semiconductor devices~~ device of a film carrier type which ~~are~~ is
disposed to lie between the ~~liquid crystal~~ display panel and the printed circuit board
and is mounted on a film carrier,

first terminals of ~~each of the plurality of semiconductor devices~~ the film carrier
being ~~respectively~~ connected to terminals of the printed circuit board by ~~an~~ a first
anisotropic conductive film, while second terminals of ~~each of the plurality of~~
~~semiconductor devices~~ the film carrier are ~~respectively~~ connected to terminals of the
~~liquid crystal~~ display panel by ~~an~~ a second anisotropic conductive film,

conductive beads which are contained in the second anisotropic conductive
film for connecting the terminals of the ~~liquid crystal~~ display panel to the second
terminals of ~~each of the plurality of semiconductor devices~~ the film carrier being set
to be higher in density than conductive beads which are contained in the first
anisotropic conductive film for connecting the terminals of the printed circuit board to
the first terminals of ~~each of the plurality of semiconductor devices~~ the film carrier.

9. (currently amended) A ~~liquid crystal~~ display device comprising:
a ~~liquid crystal~~ display panel;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a ~~plurality of semiconductor devices~~ device of a film carrier type which ~~are~~ is
disposed to lie between the ~~liquid crystal~~ display panel and the printed circuit board
and is mounted on a film carrier,

first terminals of ~~each of the plurality of semiconductor devices~~ the film carrier being ~~respectively~~ connected to terminals of the printed circuit board by ~~an~~ a first anisotropic conductive film, while second terminals of ~~each of the plurality of semiconductor devices~~ the film carrier are ~~respectively~~ connected to terminals of the ~~liquid crystal display panel~~ by ~~an~~ a second anisotropic conductive film,

conductive beads which are contained in the second anisotropic conductive film for connecting the terminals of the ~~liquid crystal display panel~~ to the second terminals of ~~each of the plurality of semiconductor devices~~ the film carrier being set to be ~~larger~~ smaller in size than conductive beads which are contained in the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of ~~each of the plurality of semiconductor devices~~ the film carrier.

10. (currently amended) A method for manufacturing a ~~liquid crystal display~~ device which includes a ~~liquid crystal display panel~~, a printed circuit board ~~disposed close to the liquid crystal display panel~~, and a ~~plurality of semiconductor devices~~ device of a film carrier type which ~~are~~ is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier, the method comprising the steps of:

connecting the ~~liquid crystal display panel~~ to the ~~plurality of semiconductor devices~~ device by a first anisotropic conductive film; and

connecting the ~~plurality of semiconductor devices~~ device to the printed circuit board by a second anisotropic conductive film having a lower melting point than the first anisotropic conductive film.

11. (currently amended) A ~~liquid crystal display~~ device comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and

a semiconductor device of a film carrier type which is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier,

terminals of the ~~semiconductor device~~ film carrier being ~~at least respectively~~ connected to terminals of the printed circuit board by an anisotropic conductive film,

conductive beads which are contained in the anisotropic conductive film being set to have sizes larger than ~~the~~ a thickness of an insulating film which exposes the terminals of the printed circuit board.

12. (currently amended) A ~~liquid crystal display device~~ comprising:

a ~~liquid crystal display panel~~;

a printed circuit board ~~disposed close to the liquid crystal display panel~~; and

a semiconductor device of a film carrier type which is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier,

terminals of the ~~semiconductor device~~ film carrier being ~~at least respectively~~ connected to terminals of the printed circuit board by an anisotropic conductive film,

surfaces of the terminals of the printed circuit board being covered with a material layer incapable of being easily oxidized.

13. (currently amended) A ~~liquid crystal display device~~ comprising:

a ~~liquid crystal display panel~~;

a printed circuit board ~~disposed close to the liquid crystal display panel~~; and

a semiconductor device of a film carrier type which is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier,

terminals of the ~~semiconductor device~~ film carrier being ~~at least respectively~~ connected to terminals of the printed circuit board by an anisotropic conductive film, at least one of the terminals of the printed circuit board or their and surfaces thereof being covered with Au.

14. (currently amended) A ~~liquid crystal display device~~ comprising:
a ~~liquid crystal display panel~~;
a printed circuit board ~~disposed close to the liquid crystal display panel~~; and
a semiconductor device of a film carrier type which is disposed to lie between the ~~liquid crystal display panel~~ and the printed circuit board and is mounted on a film carrier,

terminals of the ~~semiconductor device~~ film carrier being ~~at least respectively~~ connected to terminals of the printed circuit board by an anisotropic conductive film,
the terminals of the printed circuit board being disposed in at least two rows,
each of the terminals of one of the two rows being located at a position between adjacent ones of the terminals of the other of the two rows,

the terminals of the ~~semiconductor device~~ film carrier which are connected to the respective terminals of the printed circuit board being arranged to correspond to an arrangement of the terminals of the printed circuit board.

15. (new) A display device comprising:
a display panel;
a printed circuit board; and
at least one semiconductor device of a film carrier type which is disposed to lie between the display panel and the printed circuit board and is mounted on a film carrier;

first terminals of the film carrier being connected to terminals of the printed circuit board by a first anisotropic conductive film, while second terminals of the film carrier are connected to terminals of the display panel by a second anisotropic conductive film,

the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of the film carrier having a physical property which differs from a physical property of the second anisotropic conductive film for connecting the terminals of the display panel to the second terminals of the film carrier.

16. (new) A display device according to claim 15, wherein the physical property is at least one of melting point and relation of conductive beads.

17. (new) A display device according to claim 16, wherein a melting point of the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of the film carrier is lower than a melting point of the second anisotropic conductive film for connecting the terminals of the display panel to the second terminals of the film carrier.

18. A display device according to claim 16, wherein the physical property is at least one of size and density of the conductive beads.

19. A display device according to claim 18, wherein a size of conductive beads in the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of the film carrier is larger than a size of conductive beads in the second anisotropic conductive film for connecting the terminals of the display panel to the second terminals of the film carrier.

20. (new) A display device according to claim 18, wherein a density of conductive beads in the first anisotropic conductive film for connecting the terminals of the printed circuit board to the first terminals of the film carrier is lower than a density of conductive beads in the second anisotropic conductive film for connecting the terminals of the display panel to the second terminals of the film carrier.